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PRE-APPEAL BRIEF REQUEST FOR REVIEW

Docket Number (Optional): 3190-54

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to "Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)]

on May 23, 2006

Signature _____

Typed or printed name Lance J. Lieberman

Application Number	Filed
10/613,937	July 3, 2003

First Named Inventor: Geoffrey S.M. Hedrick

Art Unit	Examiner
2677	M. Pervan

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).
Note: No more than five (5) pages may be provided.

I am the

- [ ] applicant/inventor.
- [ ] assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)
- [x] attorney or agent of record. Registration number 28,437
- [ ] attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34 _____

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May 23, 2006
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NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

[1] *Total of 1 forms are submitted.

PRE-APPEAL BRIEF REQUEST FOR REVIEW - APPLICANT'S ARGUMENTS

In the Office Action of February 23, 2006, the Examiner has "finally" rejected claims 1-4 under 35 U.S.C. § 103(a) as allegedly obvious over United States Patent No. 6,447,132 (Harter) in view of United States Patent No. 5,760,760 (Helms). Applicant submits that the Examiner's rejection is clearly in error because the references, even when combined as proffered by the Examiner, fail to teach all of the recited method steps (claims 1 and 4) and apparatus elements (claims 2 and 3), and that the pending claims accordingly set forth allowable subject matter.

The present invention is directed to a method (claims 1 and 4) and apparatus (claims 2 and 3) for variably illuminating a flat panel display with two different types of illumination based on the level of ambient light. In bright light (*e.g.*, daylight) a fluorescent lamp illuminates the flat panel, while under low ambient light conditions (*e.g.*, nighttime) one or more LEDs (light emitting diodes) illuminate the display. At an intermediate level of brightness (a "transition illumination level"), the two types of light are variably combined to provide a seamless transition between the upper and lower ranges of illumination. The inventive method and apparatus are most especially useful in controlling the internal illumination of a flat panel display on which flight-related information is presented to the flight crew in the cockpit of an aircraft, in which the display illumination level must be maintained - to avoid overwhelming the flight crew's vision with critical flight information displays illuminated with either too much, or too little, light - within a suitable range while smoothly varying the display illumination, particularly as the critical transition between fluorescent lamp and LED-based illumination is effected.

The invention provides two types of photosensors: one to monitor the light impinging on the panel (i.e. ambient light), and one to monitor the level of generated light that is illuminating

the panel. The two monitored levels are compared and the supply of operating power to the fluorescent lamp & to the LEDs are adjusted so that at all times the proper, intended level of light is output to illuminate the panel. This combination of elements is nowhere taught or suggested by the references applied by the Examiner.

Harter discloses a two-level brightness control for a vehicle head up display (HUD) in which (Fig. 2) a high brightness light source 21 is operated to illuminate an image-projecting LCD electronic display 26 in bright or daylight conditions and a low brightness light source 22A, 22B is operated to illuminate the display in low light and nighttime conditions. Operation of the high and low brightness level light sources is based on ambient light conditions which are monitored by a light sensor 17 mounted on the outside of the vehicle. The Examiner acknowledges that Harter fails to disclose monitoring of the current display screen illumination level, or the provision of a display illumination level sensor for monitoring the current display screen illumination level, and providing that monitored level to a display screen illumination controller that is operable for illuminating the display screen at the desired display screen illumination level, as each of applicant's claims recites.

The Examiner cites the Helms reference in an effort to remedy that deficiency. Even a casual reading of Helms, however, reveals that it fails to teach or suggest the missing subject matter of applicant's claims.

Helms discloses an LCD display screen brightness control system for a laptop or portable computer. That system simply monitors and adjusts the illumination level of the portable computer's display screen based on *ambient light* conditions. The Helms system does *not* in fact monitor the actual illumination level of the display - i.e. the "current display screen illumination level" which the method (claims 1 and 4) and apparatus (claims 2 and 3) of the present invention

operatively vary - and neither does the Helms systems adjust the display illumination based on that actual, monitored display illumination level.

In the "alternate" embodiment of the control system discussed at Helms col. 2, lines 26-27 (to which the Examiner refers in his rejection of the claims), the two photodetectors *both* monitor ambient light conditions. As that paragraph explains at col. 2, lines 26-34 of Helms:

> " In an alternative embodiment, a first photodetector is located proximate the front of the LCD and a second photodetector is located proximate the back of the LCD. *In this embodiment, the brighter ambient condition is used to control the brightness level of the LCD.* This embodiment is especially useful in situations in which light is directed toward the back of the LCD, and hence toward the user's eyes, which light, while affecting the visibility of the LCD, might not be detected by the first photodetector." [Emphasis supplied]

Thus, Helms simply provides an arrangement for adjusting the display screen illumination *based on ambient light conditions*. Helms employs photosensors to detect ambient light impinging on the display from both the front *and the rear* of the display and, depending upon which photosensor detects *brighter* ambient light, uses that photosensor to control the brightness level - i.e. the illumination - of the LED. In this way, Helms seeks to enhance the viewability of the display in harsh backlit conditions when the rear-mounted photosensor detects a higher level of ambient light than does the front-mounted photosensor.

There is absolutely *nothing* in Helms that teaches, or discloses, or in any way even remotely suggests monitoring of the current display screen illumination level - i.e. the screen illumination level which the method and apparatus of applicant's claimed invention operatively vary - and supply of that monitored level to a display screen illumination controller that is operable for illuminating the display screen at the desired display screen illumination level. Helms thus fails to supply *any* teaching or suggestion to supply the claimed subject matter that is not, as the Examiner has expressly acknowledged, disclosed by Harter.

In his "Response to Arguments" in the final rejection, the Examiner states that the Helms "sensor (14) can and will sense both the ambient light and light emitted from the display screen." In truth, there is *no* basis in Helms for such a conclusion and, indeed, that conclusion is wholly inconsistent with the express teachings of Helms.

First, the front-mounted photosensor 14 of the Fig. 4 embodiment is the same as that shown in Fig. 1, which Helms describes as a "light sensor 14 ... *for detecting a level of ambient light directed toward the front of the LCD 12* and for generating signals indicative of same." (Helms Col. 3, ll. 17-21; emphasis supplied) Thus, the *only* described function of the Helms photosensor 14 is to detect a level of ambient light *directed toward the front* of the screen.

Second, the Helms specification (as noted above) unambiguously teaches that both of its photosensors are employed for monitoring *ambient* light, and that "the brighter lighting condition is used to determine the ABL [automatic brightness level] signal value for use in adjusting the brightness level of the LCD 12'" (col. 5, ll. 15-18). Viewing the position of the photosensor 14 in Helms Fig. 1, it is difficult to imagine how that photosensor - disposed centrally within the wide bezel 13 that surrounds the display screen 12 - could *possibly* receive any illumination emitted from the screen 12 so as to monitor the current display screen illumination level as required by each of applicant's claims.

Finally, were the Examiner correct in concluding that the front-mounted sensor 14 of Helms senses "both the ambient light and light emitted from the display screen", then the Helms system would be inoperable for its intended purpose. The Helms system controls screen illumination based on comparative light level signals from its respective front and rear-mounted photosensors. If as the Examiner contends the front-mounted photosensor measures a combination of ambient and screen-generated light, then each adjustment of the screen

illumination level would change the output of the front-mounted photosensor, thereby skewing the intended brightening or dimming of the screen illumination level based not on the level of ambient light but on the very screen illumination adjustments that the controller itself is effecting. In some cases, this would result in the screen illumination unintendedly continuing to brighten or dim beyond its intended and appropriate level; in others, the screen illumination level would alternately brighten and dim in a rapid, see-saw manner. In effect, the controller would be chasing its own tail, since each controller-effected adjustment of screen illumination would be interpreted by the front-mounted photosensor as a further change in the level of ambient light, resulting in a further controller-effected adjustment of screen illumination, and so on *ad infinitum*. Helms, presumably, intended no such counterproductive result, and neither would any person of skill viewing the Helms disclosure logically understand that reference as teaching or suggesting that the front-mounted photosensor will detect and/or monitor the light emitted from the display screen.

Thus, Helms fails to teach or suggest that subject matter of applicant's claims which the Examiner has acknowledged as missing from the disclosure of Harter.

The combination of prior art references proffered by the Examiner in the final rejection accordingly does not disclose each and every method step or element set forth in each of applicant's claims, which are respectfully deemed to be allowable. Reversal and withdrawal of the final rejection of claims 1 to 4 are solicited.

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